UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

MEMORANDUM

SUBJECT: Sacramento/San Joaquin Basin Plan Amendment To Establish Site-Specific Objectives for Chloroform, Chlorodibromomethane, and Dichlorobromomethane, for New Alamo, and Ulatis Creeks, Solano County, and Permit Implementation Provisions.

FROM: Matthew Mitchell Matthew Mitchell

THRU: Janet Hashimoto, Chief Janet Hashimoto
Standards and TMDL Office (WTR-2)

TO: The Record

DATE: April 4, 2013

This memorandum provides the rationale for my recommendation that EPA approve the water quality standards provisions of an amendment to the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins* (Basin Plan) that was adopted by the Central Valley Water Quality Control Board (Regional Board) on May 27, 2010 under Resolution No. R5-2010-0047. The amendment was approved by the California State Water Resources Control Board (SWRCB) on August 16, 2011 under SWRCB No. 2011-0036. EPA received the State Board's approval request on September 21, 2011. The California Office of Administrative Law (OAL) approved the amendment on November 3, 2011. EPA received OAL's approval letter on December 13, 2011.

Information Sources Used in the Review of the Amendments

My approval recommendation is based primarily on the information provided in the Regional Board's "Amendments to Water Quality Control Plan for the Sacramento River and San Joaquin River Basins To Establish Site-Specific Objectives for Chloroform, Chlorodibromomethane (DBCM), and Dichlorobromomethane (DCBM), for New Alamo, and Ulatis Creeks, Solano County, and Permit Implementation Provisions, Final Staff Report, May 2010 (Final Staff Report)."

Site-Specific Water Quality Objectives

Water quality standards regulations at 40 CFR 131.11(b)(1) require States to adopt numerical water quality criteria that are based on section 304(a) criteria, section 304(a) criteria modified to reflect site-specific conditions, or other scientifically defensible methods.

The Basin Plan Amendment adds site-specific objectives that would maintain existing water quality conditions to protect the MUN use within the segments for DBCM, DCBM, and chloroform and would provide reasonable protection for transient and incidental use. Historical THM data measured at the terminus of Old Alamo Creek, immediately prior to its confluence with New Alamo Creek were analyzed statistically to determine the probabilities with which various concentrations of DBCM, DCBM, and chloroform have occurred at this location. The Regional Board derived objectives that would equate to the 99.9 percentile concentrations historically observed at the terminus of Old Alamo Creek. These objectives would conservatively limit the maximum DBCM, DCBM, and chloroform concentrations at the head of the segments to existing levels, thereby preventing further degradation with respect to maximum THM levels in the New Alamo and Ulatis Creek segments from existing and currently regulated sources. The site-specific objectives are a maximum concentration of 45.5 µg/l for chloroform, 4.9 µg/l for DBCM, and 15.5 µg/l for DCBM.

The incremental cancer risk levels associated with the site-specific objectives, based on the risk assessment in EPA's National Recommended Water Quality Criteria (2006), would range from $10^{-4.55}$ to $10^{-4.91}$. EPA concurs that these objectives assure that cancer risk to the most highly exposed population would not exceed a 10^{-4} cancer risk level, even if the population consumed 2 L/day of water and up to 17.5 g/day or more of fish/shellfish from the segments for a 70 year lifetime. EPA also agrees that this level of exposure is not expected to occur, so that the actual human health risk for segment waters is expected to be substantially lower than the above range. No consumption of water from the segments is currently occurring and any potential use is expected to be transient and incidental in nature (e.g., days, months).

Permit Implementation Provisions

The Basin Plan Amendment also includes site-specific permit implementation provisions for NPDES permitting to address application of effluent limits to Easterly Wastewater Treatment Plant. We address these concerns in the approval letter citing EPA's authority under 40 CFR 123.62. The Easterly WWTP discharges into Old Alamo Creek which does not have the MUN beneficial use or accompanying water quality objectives associated with this use. The Easterly WWTP would have to comply with MUN and the site-specific water quality objectives further downstream in New Alamo and Ulatis Creeks. Therefore, the Basin Plan includes special procedures for assessing reasonable potential and calculating effluent limits.

EPA finds that revisions to NPDES Implementation Procedures in Chapter 4 of the Basin Plan may result in the development of NPDES permits that do not comply with State and federal antidegradation requirements. The new reasonable potential analysis procedure under *Determination of Need for Water Quality-Based Effluent Limitations* provides that reasonable potential would be established only if both the maximum effluent concentration and the

maximum in-stream concentration at the terminus of Old Alamo Creek exceed the site-specific objectives for New Alamo Creek. Therefore, effluent limitations would not be required until the applicable water quality objective is already exceeded and the beneficial use at the confluence of Old Alamo Creek and New Alamo Creek is already impaired. Application of this reasonable potential analysis procedure may result in issuance of NPDES permits that do not comply with the State Antidegradation Policy, the federal antidegradation requirements in 40 CFR 131.12, and the Clean Water Act. Accordingly, pursuant to EPA's authority to review NPDES program revisions under 40 CFR 123.62, EPA disapproves this revision to the approved California NPDES program.

Compliance with Section 7 of the Endangered Species Act

Section 7(a) of the ESA states that each federal agency shall ensure that any action authorized, funded, or carried out by such agency will not likely jeopardize the continued existence of any threatened or endangered (listed) species or result in the destruction or adverse modification of critical habitat. The Basin Plan establishes site-specific human health objectives for chloroform, chlorodibromomethane, and dichlorobromomethane in segments of the New Alamo and Ulatis Creeks. The objectives are meant to protect humans against excessive exposure to the pollutants through the consumption of fish that live in the creeks and drinking water supplies downstream of the creeks. EPA's "Recommended Approaches to Improve Endangered Species Act (ESA) Consultation on Approvals on State and Tribal Water Quality Standards," dated January 16, 2009, states that ESA consultation requirements do not apply to actions where EPA lacks discretion to protect species, or where an EPA action has no effect on listed species or critical habitat. In order for ESA section 7 to apply, EPA must be taking an action in which it has sufficient federal involvement or control to protect listed species. EPA has concluded that it lacks sufficient discretionary federal involvement or control to protect listed species when it approves state water quality standards to protect human health. Human health standards are designed to protect humans, not plants or other animals. EPA has no discretion to revise an otherwise approvable human health standard to benefit listed species. Therefore, ESA consultation requirements do not apply to this action.